WHAT IS CLAIMED IS:

1. In a solid-state imaging device having a light-receiving portion formed on a semiconductor substrate and a light-shielding film formed so as to cover an electrode formed on said semiconductor substrate on its regions other than a region above said light-receiving portion, said solid-state imaging device being formed such that said light-shielding film has a multilayer structure including a first film formed of a film deposited by a sputtering or vapor deposition and a second film deposited by a chemical vapor deposition.

2. A solid-state imaging device as claimed in claim 1, wherein said electrode and said light-shielding film have an oxide film interposed between them.

3. A solid-state imaging device as claimed in claim 1, wherein said first film is a tungsten film.

4. A solid-state imaging device as claimed in claim 1, wherein said second film is a tungsten film.

5. A solid-state imaging device as claimed in claim 1, wherein said electrode is a transfer electrode.

6. A solid-state imaging device as claimed in claim 1, wherein said electrode is made of polysilicon.

7. A method of manufacturing a solid-state imaging device comprising the steps of:

forming a light-receiving portion on a semiconductor substrate;

forming an electrode on said semiconductor substrate at least on its regions other than a region on said light-receiving portion;

forming an insulating film on said electrode; and

forming a light-shielding film so as to cover said insulating film, wherein said light-shielding film is formed in such a manner that, after a first film is formed by a sputtering or vapor deposition, a second film is formed on said first film by a chemical vapor deposition.

8. A method of manufacturing a solid-state imaging device according to claim 7, wherein a natural oxide is removed from the surface of said first film before said second film is formed.

9. A method of manufacturing a solid-state imaging device according to claim 7, wherein said first film is a tungsten film.

10. A method of manufacturing a solid-state imaging device according to claim 7, wherein said second film is a tungsten film.

11. A method of manufacturing a solid-state imaging device according to claim 7, wherein said electrode is a transfer electrode.

12. A method of manufacturing a solid-state imaging device according to claim 7, wherein said electrode is made of polysilicon.

13. A method of manufacturing a solid-state imaging device according to claim 7, wherein said insulating film is an oxide film.

14. A method of manufacturing a semiconductor device comprising the steps of:

forming a first film on the surface of a substrate by a sputtering or vapor deposition;

removing a natural oxide from the surface of said first film;

forming a second film on said first film by a chemical vapor deposition; and

forming a conductive film of a multilayer film including said first film and said second film.

15. A method of manufacturing a semiconductor device as claimed in claim 14, wherein said first film and said second film are tungsten films.

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